

Nutrient Dense

New Standard in Food Quality

David Yarrow, January 2009

TWENTY YEARS AGO ORGANIC CERTIFICATION was created by an extra-ordinary grassroots citizens' initiative. An assortment of issues drove this effort, but most fundamental was to guarantee authentic, safe foods in the marketplace. The small but growing organic farm & food industry had to protect its identity and the integrity of its products. The cutting edge was consumer alarm over toxic residues from farm chemicals and food additives, but broader concerns recognized the huge impacts of industrial agribusiness on global economies and ecologies.

At that time, we prohibited *certified organic* producers from making nutritional claims for their foods. As much as we wanted to offer foods with higher nutritional content, we lacked techniques to reliably produce such foods, affordable science to verify such foods, and distribution systems to assure them in the markets. So, to protect organic food's reputation and avoid lawsuits, certified producers couldn't advertise that organic food has higher nutrient content or value.

Yet, clearly, this higher nutritional quality was needed—and seriously sought by many consumers. And still is today.

USDA data shows mineral and vitamin content of foods has declined since such studies began. Similar studies in Britain reveal the same decreasing nutrient trends.

The fundamental cause is simple and historical: declining soil quality, increased processing and refining, tragically seen in rising chronic sickness and degenerative disease.

Now, however, growers have methods and materials to grow crops with consistently high nutrient levels. We now have simpler scientific tools and processes to monitor and verify the nutrient content of foods. And marketing



controls now are in place to assure and authenticate foods produced to a set of Standards & Practices.

Today, we can go beyond organic, and begin to offer a higher standard of quality—foods with superior nutrients.

THE REAL FOOD CAMPAIGN BEGAN in 2008 to advocate for farming methods to produce food with true nutrition. The Campaign quickly grew beyond advocacy, and is now preparing to implement a multi-level strategy to produce, market and certify "Nutrient Dense" foods.

Dan Kittredge, executive director of *Remineralize the Earth* in Northampton, Massachusetts, spearheads this effort in the Northeast. As a second-generation organic grower, Dan recognized the primacy of soil fertility in productivity, taste and other qualities of food. He also realized organic definitions and practices set a low standard for true food quality, and growers need to do more for their soils, beginning with boosting soil mineral levels.

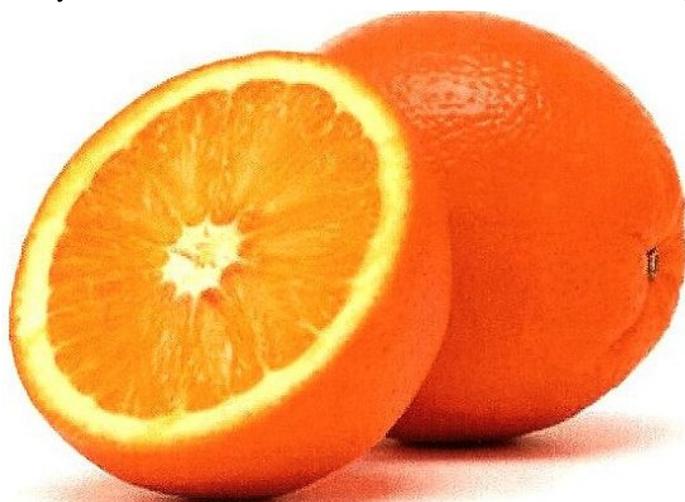
In the Midwest, **Jon Frank** of **International Ag Labs** promotes this concept of high-brix foods produced by a biological agriculture. As a farm consultant with one of the leading

Midwest ag firms, Jon has seen the results when growers shift their strategy from imported chemicals to a biology-based, grow-it-yourself approach to soil fertility. Jon has also begun collecting baseline Brix data from gardens, farms and foodstores.

Internationally, a leading advocate of biological agriculture and nutrient dense foods is Dr. Arden Andersen, farmer, doctor, agriculture consultant, and guru of this new farm & food paradigm. Dr. Andersen teaches farmers on four continents how to create soil fertility to grow crops with higher nutrients, fewer chemical fertilizers, and greater disease and pest resistance. As a medical doctor, Arden Andersen understands too well that the leading cause of sickness and disease is nutrient-poor diet and food quality. As a farmer, Dr. Andersen understands the cure of these troubles isn't in a medicine bottle, but is found in genuine, full spectrum soil fertility.

The first training program in the Northeast to teach farmers to manage soils to grow "nutrient dense" foods will be February 5-7 in Barre, Massachusetts, sponsored by NOFA-MA. This 3-day advanced seminar in **Soil Mineral Nutrition** will teach natural science and practical farm management to produce higher quality crops.

The focus is the relationship between healthy soils and





better plant and livestock production. Information conveyed is the foundation for ecologically sustainable agriculture with high yield and quality nutrition.

These methods apply to all farm sectors: vegetable, fruit, pastoral, dairy, cropping, horticulture:

- Biochemistry, physics, biology & botany to guide management decisions
- Improve soil biology, reduce weeds, disease & insects
- Tests to evaluate profitable soil, plant & livestock management
- Fertilization & management to boost nutritional quality of crops
- Formulas and suggestions for fertilization
- Implications for human health

Dr. Arden Andersen, soil scientist, farm consultant, physician, will teach this seminar in Soils & Agronomy. Dr. Andersen specializes in environmentally sustainable management of soils, crops and animals. He is a consultant on education, product formulation and market development, and a world authority in biological agriculture, who consults with farms worldwide, teaches courses in the US, Australia and New Zealand, with a medical practice in Goshen, Indiana. Dr. Andersen was keynote speaker at NOFA's 2008 Summer Conference.

Dr. Andersen advocates a biological approach to soil fertility, focused on nurturing strong, stable soil food webs. A chemical paradigm dominated the 20th Century, based on synthetic NPK fertilizers. Biological farming sees soil as a living community—micro-organisms and larger life forms in the soil food web. This begins by boosting overall mineral levels, balancing the seven major minerals, and assuring full spectrum supply of all trace elements—usually with sea minerals. Adequate organic carbon, in balance with nitrogen, must also be available. One result of achieving soil mineral balance is that weeds, insect pests and diseases diminish—even disappear.

Biological agriculture creates soil environments that encourage and nurture microbial communities. Soil inoculants assure a thriving diversity of organisms. Once present, this microbiotic community manages soil fertility

for the farmer, including pH, and delivers balanced, complete nutrients to plant roots. Foliar sprays further enhance plant nutrient uptake and use. Insects mostly infest unhealthy plants, and disease mostly infects plants with nutrient deficiencies.

To monitor plant nutrient density, growers take Brix readings with a refractometer, a simple handheld device to measure the bending of light. Light refracts at sharper angles as dissolved solids in plant sap increase—principally sugars, but also minerals. Plants with low Brix (less than 12) are nutrient poor, and attract insects, fungi and diseases. By taking plant sap Brix readings routinely, growers assess the effect of their soil fertility management program on crop nutritional quality.

Growers who take a **Soil Mineral Nutrition** seminar can enroll to become “nutrient dense” producers. In the next year, these growers can implement these biological methods to improve their soils, upgrade their management practices and boost their crop nutrient content.

The Real Food Campaign will form a Standards Board to draft “**Standards & Practices**” for “Nutrient Dense” certification, and create tools for marketing, promotion and consumer education. Distributors, retailers and chefs will be enlisted to feature “Nutrient Dense” foods.

Growers who successfully produce “nutrient dense,” high Brix crops can qualify to begin marketing certified “Nutrient Dense” foods in 2010.

Are you ready to go beyond organic?

Will you pay premium prices for superior nutrition?

Can you buy this next higher standard in food quality?

To register for the February training:

www.nofamass.org/seminars/winterseminar.php

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